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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/551,809	04/18/2000	Yoshimasa Furuike	1-31	2666

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EXAMINER

LY, ANH

ART UNIT PAPER NUMBER

2172

DATE MAILED: 03/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/551,809

Applicant(s)

FURUIKE, YOSHIMASA

Examiner

Anh Ly

Art Unit

2172

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-19 and 21-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-19 and 21-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) .
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 12/24/2002 with respect to claims 1-36 have been considered but are moot in view of the new ground(s) of rejection.
2. Claims 2 and 20 have been cancelled (page #6).
3. Claims 37-40 have been added (page #6).
4. Claims 1, 3-19 and 21-40 are pending in this application.

Specification

5. The abstract of the disclosure is objected to because on line 7 of the abstract, "controller7classifiestheobtainedrecordsaccording totheattributions" replace with – controller classifies the obtained records according to the attributions--. And also **insert space/blank between words where it is needed in the both abstract and claims.** Corrections are required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 3-19 and 21-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,393,149 issued to Friederich et al. (herein Friederich) in view of US Patent No. 6,272,180 issued to Lei.

With respect to claim 1, Friederich discloses attribution record group forming means for classifying data (groupings of data into subset of layer of geographic data: col. 10, lines 8-31; also see col. 11, lines 59-67 and col. 12, lines 1-8 and col. 2, lines 62-67), which is requested to be stored into a database (geographic database: col. 8, lines 1-3), according to attributions defined in the database, and for making plural attribution record groups corresponding to each of the attributions (col. 13, lines 49-67 and col. 14, lines 1-18; also see col. 2, lines 62-67 and col. 12, lines 42-47); data compressing means for compressing the attribution record groups in a unit of each of the attribution record groups (see abstract, col. 4, lines 1-17 and lines 61-67; also see col. 5, lines 1-8 and col. 18, lines 7-41); and file forming means for combining each of the attribution record groups, which are compressed by the data compressing means, and for forming a data base file, wherein the data compressing means compresses a particular attribution record group, which is to be searched (col. 18, lines 7-41 and lines 59-67; and see abstract, col. 1, lines 8-59, col. 2, lines 1-61, col. 3, lines 12-67, col. 4, lines 1-67, see figs 8-11c, col. 5, lines 65-67, col. 6, lines 1-64, col. 17, lines 22-67, col. 18, lines 1-67, col. 19, lines 1-67 and col. 20, lines 1-54).

Friederich does not explicitly indicate, "a second compression method, the first compression method compresses the attribution record group so that the attribution record group after being compressed can be decompressed faster than that

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compressed by using the second compression method, and the second compression method compresses the attribution record group so that a compression rate is higher than that of the first compression method.”

However, Lei discloses more than one compression method and decompressed faster and higher compression rate (col. 5, lines 1-11 and col. 10, lines 27-34 and 56-67).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Friederich with the teachings of Lei so as to have a compression and decompression techniques for managing database. This combination would have more than one compression method or algorithm by using run-length encoder (Lei – col. 2, lines 20-34) for the fast decompressor (col. 5, lines 1-11) and a higher compression rate (col. 10, lines 27-34) and also being used for various kinds of data (Friederich – col. 3, lines 50-67 and col. 4, lines 1-25) in the searching the data in the compressed data format environment.

With respect to claims 3-5, Friederich attribution record group forming means for classifying data, which is requested to be stored into a database, according to attributions defined in the database, and for making plural attribution record groups corresponding to each of the attributions; data compressing means for compressing each of the attribution record groups into blocks of data; file forming means for combining each of the attribution record groups, which are compressed by the data compressing means, and for forming a data base file; data decompressing means for decompressing a particular attribution record group (col. 18, lines 7-57), which is to be

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searched, when a search request for searching the database file is received (col. 14, lines 19-22; also see col. 15, lines 42-50); and searching means for searching for a target record containing a search key in the particular attribution record group (col. 21, lines 5-15), wherein the data decompressing means further decompresses the other attribution record groups, which are different from the particular attribution record group, when the searching means finds the target record (groupings of data into subset of layer of geographic data: col. 10, lines 8-31; also see col. 11, lines 59-67 and col. 12, lines 1-8 and col. 2, lines 62-67; geographic database: col. 8, lines 1-3; col. 13, lines 49-67 and col. 14, lines 1-18; also see col. 2, lines 62-67 and col. 12, lines 42-47; and col. 18, lines 7-57); the data decompressing means reads out only the particular attribution record group from the database file, and decompresses only the particular attribution record group, when the search request is received (col. 18, lines 7-57 and col. 15, lines 42-50 and col. 21, lines 5-15); and the data decompressing means further decompresses the other attribution record groups, when the searching means finds the target record (col. 9, lines 65-67 and col. 10, lines 1-6); and data decompressing means for decompressing a particular attribution record group, which includes a target record to be retrieve, when a retrieve request for retrieving the target record from the database file is received (col. 18, lines 8-57, col. 31, lines 50-67, col. 32, lines 36-67 and col. 33, lines 1-62).

With respect to claim 6, Friederich discloses attribution record group forming means for classifying data which is requested to be stored into a database, according to attributions defined in the database, and for making plural attribution record groups

corresponding to each of the attributions; data compressing means for compressing only the other attribution record groups, which are different from a particular attribution record group to be searched, in the plural attribution record groups; and file forming means for combining the other attribution record groups, which are compressed by the data compressing means, and the particular attribution record group, so as to forth a database file (groupings of data into subset of layer of geographic data: col. 10, lines 8-31; also see col. 11, lines 59-67 and col. 12, lines 1-8 and col. 2, lines 62-67; geographic database: col. 8, lines 1-3; abstract, col. 1, lines 8-59, col. 2, lines 1-61. col. 3, lines 12-67, col. 4, lines 1-67, see figs 8-11c, col. 5, lines 65-67, col. 6, lines 1-64, col. 17, lines 22-67, col. 18, lines 1-67, col. 19, lines 1-67 and col. 20, lines 1-54; col. 31, lines 52-67, col. 32, lines 1-67 and col. 33, lines 1-63).

Friederich does not clearly indicate, "classifying data which is requested to be stored into a database."

However, Friederich discloses groupings of data record of a database based on the subset of layer (col. 10, lines 8-31; also see col. 11, lines 59-67 and col. 12, lines 1-8 and col. 2, lines 62-67; geographic database: col. 8, lines 1-3).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Friederich such as groupings of record, subset of layer of geographic data (col. 10, lines 8-31; also see col. 11, lines 59-67 and col. 12, lines 1-8 and col. 2, lines 62-67; geographic database: col. 8, lines 1-3) so as to have a database managing system in and also being used for

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various kinds of data (Friederich – col. 3, lines 50-67 and col. 4, lines 1-25) in the searching the data in the compressed data format environment.

With respect to claims 7-10, Friederich discloses data compressing means compresses each of the other attribution record groups into blocks of data (col. 10, lines 8-31; also see col. 11, lines 59-67 and col. 12, lines 1-8 and col. 2, lines 62-67; geographic database: col. 8, lines 1-3); and searching means for searching for a target record containing a search key in the particular attribution record group, and data decompressing means for decompresses the other attribution record groups, when the searching means finds the target record; data decompressing means reads out only the particular attribution record group from the database file, and decompresses only the particular attribution record group; and the data decompressing means further decompresses the other attribution record groups, when the searching means finds the target record; and data decompressing means for decompressing a particular attribution record group, which includes a target record to be retrieved, when a retrieve request for retrieving the target record from the database file is received (col. 5, lines 65-67, col. 6, lines 1-64, col. 17, lines 22-67; col. 18, lines 8-57, col. 31, lines 50-67, col. 32, lines 36-67 and col. 33, lines 1-62).

With respect to claim 11-12, Friederich discloses the data compressing means further compresses a specific record string, which appears in the attribution record groups frequently compared to the other record string, to reduce a size of the attribution record groups (col. 19, lines 60-67 and col. 20, lines 1-39); and the data compressing means further compresses a specific record string, which appears in the attribution

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record groups frequently compared to the other record string, to reduce a size of the attribution record groups (col. 19, lines 60-67 and col. 20, lines 1-39).

With respect to claim 13, Friederich discloses data decompressing means for decompressing a particular attribution record group (col. 18, lines 7-57), which is to be searched (col. 14, lines 19-22 and col. 15, lines 42-50), when a search request for searching the database file is received; and searching means for searching for a target record containing a search key in the particular attribution record group, wherein the data decompressing means further decompresses the other attribution record groups, which are different from the particular attribution record group, when the searching means finds the target record (col. 21, lines 5-15).

Friederich does not clearly indicate, "searching means finds the target record."

However, Friederich discloses searching for matching substrings (col. 21, lines 8-10).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Friederich such as groupings of record, subset of layer of geographic data (col. 10, lines 8-31; also see col. 11, lines 59-67 and col. 12, lines 1-8 and col. 2, lines 62-67; geographic database: col. 8, lines 1-3) and searching for matching substring (col. 21, lines 5-12) so as to have a database managing system in and also being used for various kinds of data (Friederich – col. 3, lines 50-67 and col. 4, lines 1-25) in the searching the data in the compressed data format environment.

With respect to claims 14-15, Friederich discloses data decompressing means reads out only the particular attribution record group from the database file and decompresses only the particular attribution record group, when the search request is received; and the data compressing means further decompresses the other attribution record groups, when the searching means finds the target record (col. 18, lines 7-57 and col. 21, lines 5-15); and data decompressing means for decompressing a particular attribution record group, which includes a target record to be retrieved, when a retrieve request for retrieving the target record from the database file is received (col. 18, lines 7-57 and col. 21, lines 5-15).

With respect to claim 16, Friederich discloses data decompressing means for decompressing a particular attribution record group, which is to be searched, when a search request for searching the database file is received; and searching means for searching for a target record containing a search key in the particular attribution record group, wherein the data decompressing means further decompresses the other attribution record groups, which are different from the particular attribution record group, when the searching means finds the target record (col. 18, lines 7-57; col. 14, lines 19-22 and col. 15, lines 42-50; and col. 21, lines 5-15).

Friederich does not clearly indicate, "searching means finds the target record."

However, Friederich discloses searching for matching substrings (col. 21, lines 8-10).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Friederich such as

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groupings of record, subset of layer of geographic data (col. 10, lines 8-31; also see col. 11, lines 59-67 and col. 12, lines 1-8 and col. 2, lines 62-67; geographic database: col. 8, lines 1-3) and searching for matching substring (col. 21, lines 5-12) so as to have a database managing system in and also being used for various kinds of data (Friederich – col. 3, lines 50-67 and col. 4, lines 1-25) in the searching the data in the compressed data format environment.

With respect to claims 17-18, Friederich discloses searching means for searching for a target record containing a search key in the particular attribution record group, and data decompressing means for decompresses the other attribution record groups, when the searching means finds the target record; and the database file is made up so that each of the plural attribution record groups is compressed in a unit of each of the attribution record groups, the data decompressing means reads out only the particular attribution record group from the database file, and decompresses only the particular attribution record group; and the data decompressing means further decompresses the other attribution record groups, when the searching means finds the target record (col. 3, lines 12-67, col. 4, lines 1-67, see figs 8-11c, col. 5, lines 65-67, col. 6, lines 1-64, col. 17, lines 22-67, col. 18, lines 1-67, col. 19, lines 1-67 and col. 20, lines 1-54; col. 31, lines 52-67, col. 32, lines 1-67 and col. 33, lines 1-63).

Claim 19 is essentially the same as claim 1 except that it is directed to a method rather than an apparatus ('149 of groupings of data into subset of layer of geographic data: col. 10, lines 8-31; also see col. 11, lines 59-67 and col. 12, lines 1-8 and col. 2, lines 62-67; geographic database: col. 8, lines 1-3; col. 13, lines 49-67 and col. 14, lines

1-18; also see col. 2, lines 62-67 and col. 12, lines 42-47; see abstract, col. 4, lines 1-17 and lines 61-67; also see col. 5, lines 1-8 and col. 18, lines 7-41; col. 18, lines 7-41 and lines 59-67; and see abstract, col. 1, lines 8-59, col. 2, lines 1-61. col. 3, lines 12-67, col. 4, lines 1-67, see figs 8-11c, col. 5, lines 65-67, col. 6, lines 1-64, col. 17, lines 22-67, col. 18, lines 1-67, col. 19, lines 1-67 and col. 20, lines 1-54; and '180 of col. 5, lines 1-11 and col. 10, lines 27-34 and 56-67), and is rejected for the same reason as applied to the claim 1 hereinabove.

Claims 21-23 are essentially the same as claims 3-5 except that it is directed to a method rather than an apparatus (groupings of data into subset of layer of geographic data: col. 10, lines 8-31; also see col. 11, lines 59-67 and col. 12, lines 1-8 and col. 2, lines 62-67; geographic database: col. 8, lines 1-3; col. 13, lines 49-67 and col. 14, lines 1-18; also see col. 2, lines 62-67 and col. 12, lines 42-47; and col. 18, lines 7-57; col. 19, lines 12-67, col. 20, lines 1-67, col. 21, lines 34-67, col. 22, lines 1-67, col. 23, lines 15-67, col. 24, lines 1-58; col. 18, lines 8-57, col. 31, lines 50-67, col. 32, lines 36-67 and col. 33, lines 1-62), and is rejected for the same reason as applied to the claims 3-5 hereinabove.

Claim 24 is essentially the same as claim 6 except that it is directed to a method rather than an apparatus (groupings of data into subset of layer of geographic data: col. 10, lines 8-31; also see col. 11, lines 59-67 and col. 12, lines 1-8 and col. 2, lines 62-67; geographic database: col. 8, lines 1-3; abstract, col. 1, lines 8-59, col. 2, lines 1-61. col. 3, lines 12-67, col. 4, lines 1-67, see figs 8-11c, col. 5, lines 65-67, col. 6, lines 1-64, col. 17, lines 22-67, col. 18, lines 1-67, col. 19, lines 1-67 and col. 20, lines 1-54; col. 31,

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lines 52-67, col. 32, lines 1-67 and col. 33, lines 1-63), and is rejected for the same reason as applied to the claim 6 hereinabove.

Claims 25-28 are essentially the same as claims 7-10 except that it is directed to a method rather than an apparatus (col. 10, lines 8-31; also see col. 11, lines 59-67 and col. 12, lines 1-8 and col. 2, lines 62-67; geographic database: col. 8, lines 1-3; col. 5, lines 65-67, col. 6, lines 1-64, col. 17, lines 22-67; col. 18, lines 8-57, col. 31, lines 50-67, col. 32, lines 36-67 and col. 33, lines 1-62), and is rejected for the same reason as applied to the claims 7-10 hereinabove.

Claims 29-30 are essentially the same as claims 11-12 except that it is directed to a method rather than an apparatus (col. 19, lines 60-67 and col. 20, lines 1-39; col. 19, lines 60-67 and col. 20, lines 1-39), and is rejected for the same reason as applied to the claims 11-12 hereinabove.

Claim 31 is essentially the same as claim 13 except that it is directed to a method rather than an apparatus (col. 18, lines 7-57; col. 14, lines 19-22 and col. 15, lines 42-50; and col. 21, lines 5-15), and is rejected for the same reason as applied to the claim 13 hereinabove.

Claims 32-33 are essentially the same as claims 14-15 except that it is directed to a method rather than an apparatus (col. 18, lines 8-40, col. 31, lines 52-67, col. 32, lines 1-67 and col. 33, lines 1-63; col. 17, lines 4-30), and is rejected for the same reason as applied to the claims 14-15 hereinabove.

Claim 34 is essentially the same as claim 16 except that it is directed to a method rather than an apparatus (col. 18, lines 8-40, col. 31, lines 52-67, col. 32, lines 1-67 and

col. 33, lines 1-63; col. 17, lines 4-30), and is rejected for the same reason as applied to the claim 16 hereinabove.

Claims 35-36 are essentially the same as claims 17-18 except that it is directed to a method rather than an apparatus (col. 3, lines 12-67, col. 4, lines 1-67, see figs 8-11c, col. 5, lines 65-67, col. 6, lines 1-64, col. 17, lines 22-67, col. 18, lines 1-67, col. 19, lines 1-67 and col. 20, lines 1-54; col. 31, lines 52-67, col. 32, lines 1-67 and col. 33, lines 1-63; and searching for target record: col. 21, lines 5-15), and is rejected for the same reason as applied to the claims 17-18 hereinabove.

With respect to claims 37-40, Friederich discloses wherein the data decompressing means decompress an attribution group including a target record to be retrieved as the particular attribution group when a retrieve request for retrieving the target record from the database file is received (col. 21, lines 5-15); wherein the data compressing means further comprises a specific record string, which appears in the attribution record groups frequently compared to the other record string, for reducing a size of the attribution record groups (col. 18, lines 7-57 and col. 21, lines 5-15; also see col. 24, lines 25-46); a data decompressing step for decompressing a particular attribution group, which includes a target record to be retrieved, when a retrieve request for retrieving the target record from the database file is received (col. 21, lines 5-15); and wherein the data compressing step further comprises reducing a size of the attribution record groups through a specific record string, which appears in the attribution record groups frequently compared to the other record string (col. 18, lines 7-57 and col. 21, lines 5-15; also see col. 24, lines 25-46).

Contact Information

8. Any inquiry concerning this communication should be directed to Anh Ly whose telephone number is (703) 306-4527 or via E-Mail: **ANH.LY@USPTO.GOV**. The examiner can be reached on Monday - Friday from 8:00 AM to 4:00 PM.

If attempts to reach the examiner are unsuccessful, see the examiner's supervisor, Kim Vu, can be reached on (703) 305-4393.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to: (703) 746-7238 (after Final Communication)

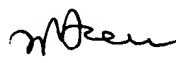
or: (703) 746-7239 (for formal communications intended for entry)

or: (703) 746-7240 (for informal or draft communications, or Customer Service Center, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Fourth Floor (receptionist).

Inquiries of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

AL/h
Mar. 4th, 2003.


HOSAIN T. ALAM
PRIMARY EXAMINER